

# PATENT SPECIFICATION

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## Road Tamper.

### COMPLETE SPECIFICATION

We, LOSENHAUSENWERK DUSSELDORFER MASCHINENBAU A.-G., of Schlüterstrasse 19, Düsseldorf-Grafenberg, Germany, a German company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to a device for road tamping with the employment of road tampers, in which directing vibrators for producing directed vibrations, which contain a conveying component, are each mounted on a base plate and the base plate is connected by springs with an upper part which does not partake in the vibrations and which is loaded by a weight.

It is known for the purpose of road tamping or grading to use machines having a base plate that is excited to perform vibrations, an upper part being resiliently attached to the first mentioned base plate. This upper part serves as a carrying element for the load weight which is preferably formed by the propelling engine. In the known manner, such road tampers are so designed that an inclined component of the vibrations of the base plate is used to produce an advance movement of the instrument. It is therefore possible, by appropriate adjustment of the direction of vibration, to obtain a more or less slow movement of the instrument in the forward or backward direction. However, certain difficulties are involved if steering is desired so that a turning motion is performed by the device.

When tamping larger areas having small, locally limited unevennesses, it is found that the road tamper adapts itself to these unevennesses of the ground and takes an inclined position which is absolutely undesirable. Instead of a plane surface of the ground, several tracks of the tamper showing an inclination towards one another may

be produced.

It is therefore an object of the invention to provide an improved road tamping device for overcoming the aforesaid difficulties. According to the invention, two or more tampers, arranged side-by-side, are coupled together in such a manner by connection of their upper parts that the base plates carry out their vibrations independently of one another. In this way, a unit is produced which works simultaneously on a surface of any desired width in which any adaptation of the single tampers to smaller unevennesses of the ground is eliminated. Owing to this fact, there is a material difference whether a strip of ground is passed over by single road tampers (simultaneously or successively) or whether tamping is effected by means of two or more road tampers which are coupled as proposed by the present invention. A special advantage of such a unit consists in the fact that its manoeuvrability is considerably improved as compared with single road tampers because it is possible, without further difficulty, to effect a turning movement of the tamper unit by adjusting the individual tampers to different advancing directions or speeds. If, for example, in the case of two coupled road tampers, one is adjusted to forward and the other to reverse movement, a turning movement is performed by the unit. A further advantage obtained by the coupling of a plurality of tampers consists in the fact that such a road tamper unit can be conveniently operated by one attendant, whereas, otherwise, one operator is necessary for each single road tamper.

An embodiment of the invention is illustrated diagrammatically in the accompanying drawings and more fully explained in the following detailed description. Of these drawings, Fig. 1 is a plan and Fig. 2 is an elevation of this embodiment.

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The drawings show three road tampers 1, 2 and 3 of identical and conventional construction. Each of these road tampers 1, 2 and 3 has a base plate 5 provided with an out-of-balance vibrator 4 (Fig. 2) and an upper part 7 supported by springs 6 (Fig. 2) on the base plate 5. The upper part 7 serves as a support for a driving engine 8, e.g., a diesel engine, driving the out-of-balance vibrator 4 in a manner not shown.

The direction of vibration of the vibrator 4 can be adjusted in the central plane of the device by means of the operating hand-wheel 9 to impart a greater or smaller inclination, so that an advance movement of the road tamper in forward or reverse direction is obtained.

The upper parts 7, 7' 7'' of the three road tampers 1, 2, 3 are rigidly fixed to each other by means of connecting strips 10, 10' and 11, 11' attached to the front and the rear of the tampers. The result of such an assembly is that the individual road tampers 1, 2 and 3 are now prevented from taking an inclined position and adapting themselves to the unevennesses of the ground shown at 12, 13 and 14. An especially good tamping is thus obtained at the uneven points 12, 13 and 14 and a better levelling of the ground can be effected.

The whole unit can be operated by only one person. A turning motion is performed by the tamping unit if—as indicated by the arrows—the tamper 3 is adjusted to advancing movement and the tamper 1 to backward movement. The unit can be steered in this manner without any difficulty and can thus be moved in any desired direction of advance.

#### 40 WHAT WE CLAIM IS:—

1. A device for road tamping with the employment of road tampers, in which directing vibrators for producing directed vibrations, which contain a conveying component, are each mounted on a base plate

and the base plate is connected by springs with an upper part which does not partake in the vibrations and which is loaded by a weight, characterised by the feature that two or more tampers, arranged side-by-side, are coupled together in such a manner by connection of their upper parts that the base plates carry out their vibrations independently of one another. 50

2. A device according to claim 1, characterised by the feature that the upper parts are coupled together by rigid connecting members. 55

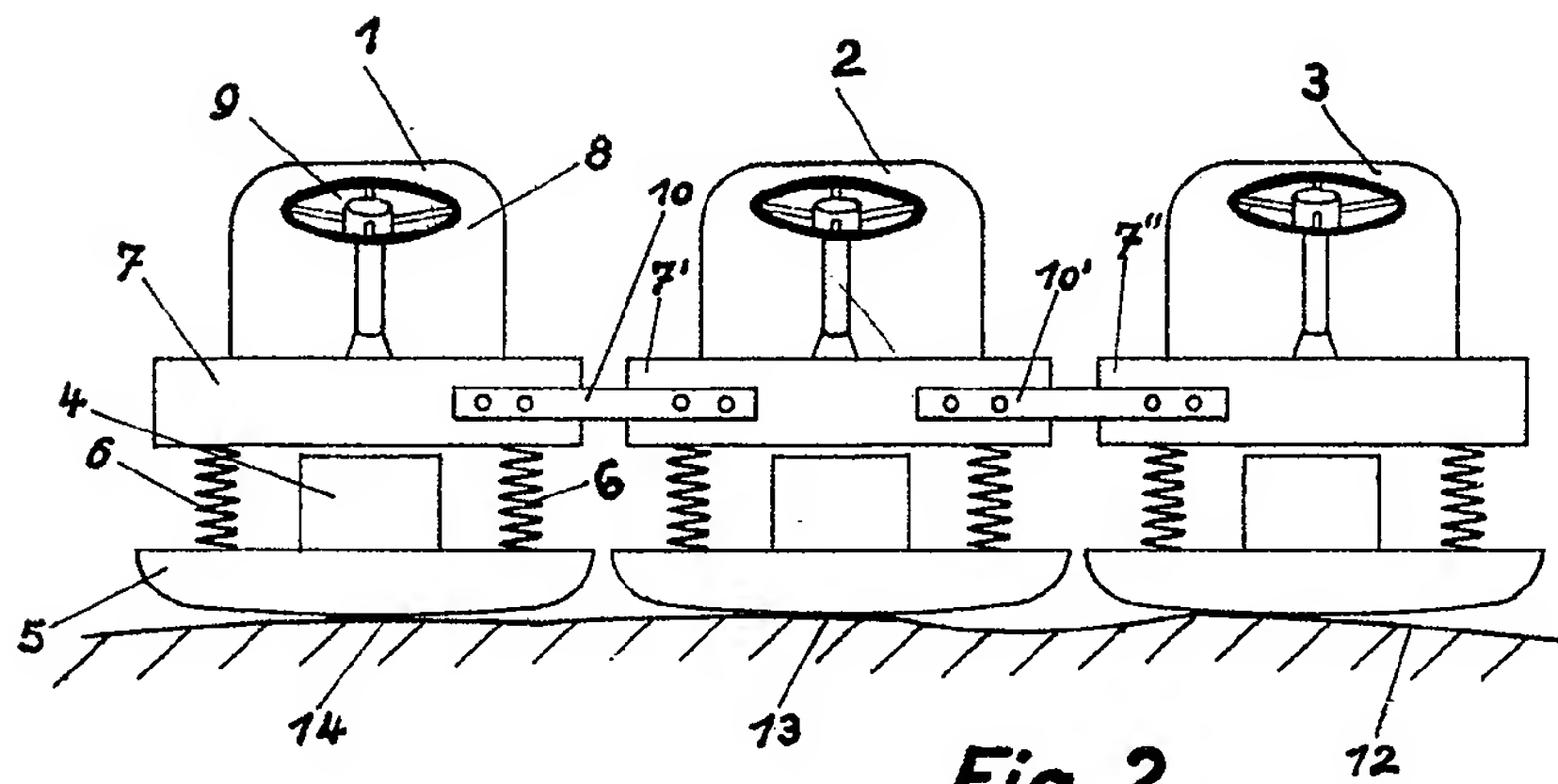
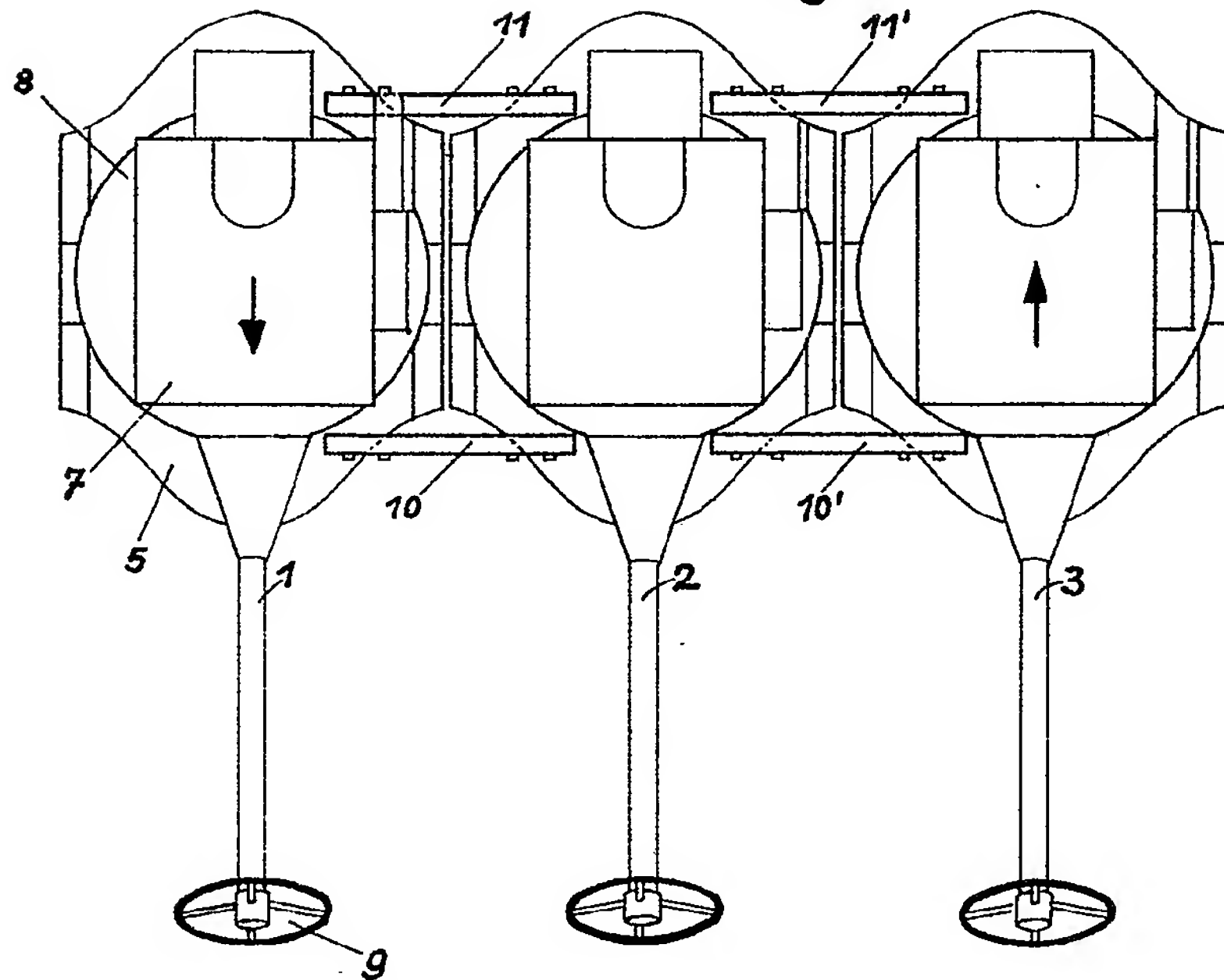
3. A device according to claim 1 or 2, characterised by the feature that the directions of the vibrations produced by the directing vibrators are, in the case of the individual road tampers, adjustable independently of one another, so that a turning movement of the road-tamper unit is obtained by effecting different adjustment of the direction of vibration in the case of the individual road tampers. 60 65

4. A device for road tamping, constructed substantially as hereinbefore described with reference to and as illustrated by the accompanying drawings. 70

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**Fig. 1**



**Fig. 2**